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NEW ECONOMIC-ADMINISTRATIVE REGIONS IN THE USSR

Recent years have witnessed a trend in the USSR toward decentralization of state activity in both agriculture and industry. Aspects of short-term economic planning and administration have been shifted from All-Union to Union Republic or lower administrative levels in an effort to increase production through encouragement of local initiative and reduction of vertical chains of command. Downward revision of goals for the Sixth Five-Year Plan, however, indicates that these measures have not been effective enough to provide the anticipated increase in industrial production. The latest and most drastic of measures for revitalizing economic growth is decentralization of industrial management. Acting in accordance with a report by N.S. Khruschev, the Supreme Soviet of the USSR on 10 May 1957 passed the "Law on the Further Improvement of the Organization of the Management of Industry and Construction." Article 2 of the law provides that "management of industry and construction shall be carried out according to the territorial principle on the basis of Economic-Administrative Areas." Delimitation of the areas is left to the jurisdiction of individual republics. The law further provides for abolition of 25 Union ministries and consolidation of several others, with subsequent dispersal of many of their functions to the newly created Economic-Administrative Councils (sovnarkhozy), one of which is located in each Economic-Administrative Area. The law called for implementation of the decentralization scheme by 1 July 1957.

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Initial discussion regarding the nature of the new Economic-Administrative Areas included speculation that these units were a reconsideration or revision of the type of economic regions on which the five-year plans are formulated. The First and Second Five-Year plans were based on a division of the country into 21 economic regions. Regions were delimited, insofar as possible, on the basis of some pre-existing factor of economic or ethnic homogeneity; and the plans called for economic specialization in each region and exchange of products between regions. A change in the concept of economic regionalization was incorporated in the Third Five-Year Plan. This plan envisaged a maximum of regional self-sufficiency. The goal of self-sufficiency demanded that the areas have an economy that encompassed the gamut of agricultural and industrial activity. Therefore, fewer and larger regions were established -- 15 in all (Map 13702). This division, for purposes of long-range planning and regional development, has survived to the present time, although the ideal of self-sufficiency has never been achieved. Since long-range planning and control functions remain centralized under Gosplan, there is no reason to assume that the traditional 15 Economic Regions have been abandoned or invalidated by division of the country into small areas for purposes of industrial management.

It appears that territorial delimitation of the new Economic-Administrative Areas is a matter of administrative convenience rather than carefully planned economic regionalization. Since the law was

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passed, action by individual Union Republics has resulted in the creation of a total of 105 Economic-Administrative Areas within the Soviet Union (Map 26052). Of these Economic-Administrative Areas, 90 are identical with territorial-administrative units and the other 15 are simply a combination of 2 or more units. Only insofar as the delimitation of territorial-administrative units is based on economic considerations can the Economic-Administrative Areas be considered economic regions.

Seventy Economic-Administrative Areas were established in the RSFSR. The areas are coincident with oblasts, krays, or ASSR's with only 3 exceptions: (1) Leningradskaya, Novgorodskaya, and Pskovskaya oblasts are combined under the Leningrad Economic Administrative Council; (2) Velikolukskaya and Kalininskaya oblasts are both under the Kalinin Council; and (3) the city of Moscow has been made a separate Economic-Administrative Area because of the unusually large number of industrial enterprises located within the urban area. The expressed reason for subordination of Velikolukskaya, Pskovskaya, and Novgorodskaya oblasts to the economic councils of other oblasts was that the industrial development in these oblasts was insufficient to justify the creation of separate economic councils. On the other hand, separate Economic-Administrative Areas have been created for territorial-administrative units with even less industrial development simply because they are so vast and remote that administration from another oblast or kray would involve a greater communication problem than already exists.

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The Ukraine contains 11 Economic-Administrative Areas, 5 of which are separate oblasts and 6 of which combine 2 or more oblasts. The Kiev area is the largest. Kazakhstan is divided into 9 areas and Uzbekistan into 4. Each of the remaining 11 republics is a separate Economic-Administrative Area.

In February of 1957 the power to make revisions in territorial-administrative units was transferred from All-Union to Union Republic jurisdiction. The formation of Economic-Administrative Areas is also a matter of republic jurisdiction. The use of territorial-administrative units as Economic-Administrative Areas, particularly in the RSFSR, has brought about reconsideration of the formation of some oblasts, and there is a prospect that territorial-administrative changes will be made in conformity with the new orientation toward areas of efficient industrial management. Three years ago, when the emphasis was on agriculture, a number of oblasts were split and areas of agricultural significance were given separate oblast administrations. Now the emphasis has shifted. Arzamaskaya Oblast' has already been reincorporated into Gorkovskaya Oblast', and a proposal has been heard for the remerging of Rostovskaya and Kamenskaya oblasts so that the coal and power resources of Kamenskaya Oblast' would not be under a separate administration from the industrial enterprises of Rostovskaya Oblast'. The reincorporation of Belgorodskaya Oblast' into Kurskaya Oblast' has also been discussed, and other changes may be necessitated if unusual problems of administration arise in Economic-Administrative Areas that cover more than one oblast.

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Industrial management on the "territorial principle" may effect minor changes in both transportation patterns and location of small industrial and construction enterprises. The decentralization envisages an increase in production ties among enterprises within the same Economic-Administrative Area. Under the central ministry system, it was not unusual to haul materials for hundreds of miles from a ministry's main source of supply to an enterprise in a locality where the same materials were available. First Secretary of the Communist Party of Azerbaydzhan, Mustafayev, cites the case of several million tons of oil being shipped yearly into Baku as an outstanding example of lack of cooperation among ministries. Procurement of supplies at the local level could result in considerable savings in transportation costs. Savings are also anticipated through consolidation of enterprises that were formerly under different ministries but performed the same function in the same area. Now that many decisions formerly referred to Moscow can be dealt with at the local level, savings in time should also accrue.

Obstacles to efficient operation of the new system, however, are plentiful. Several enterprises have already been accused of retaining materials for use in their own areas rather than supplying their traditional customers. Continued supply difficulties could lead to uneconomic expenditures for construction of local enterprises to produce what is needed. The tendency for Economic-Administrative Areas to become closed systems creates a problem for the central planning authority, as does the task of coordinating the short-term

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plans of the multitude of Economic-Administrative Councils. Relocation of industrial management, in addition to other decentralization measures of the last several years, has expanded jurisdiction of the union republics to an extent which may seriously affect centralized political control. (CONFIDENTIAL)

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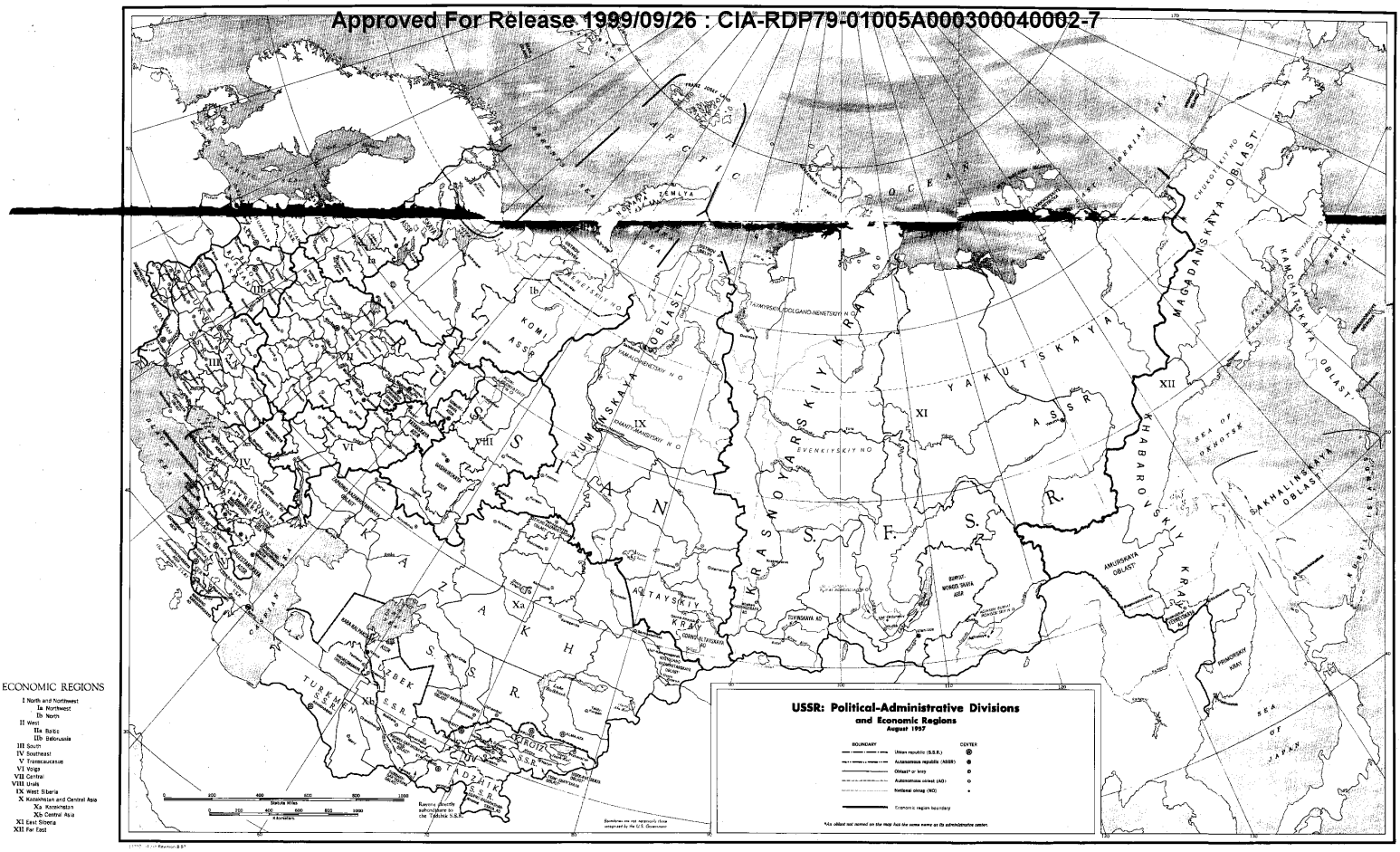

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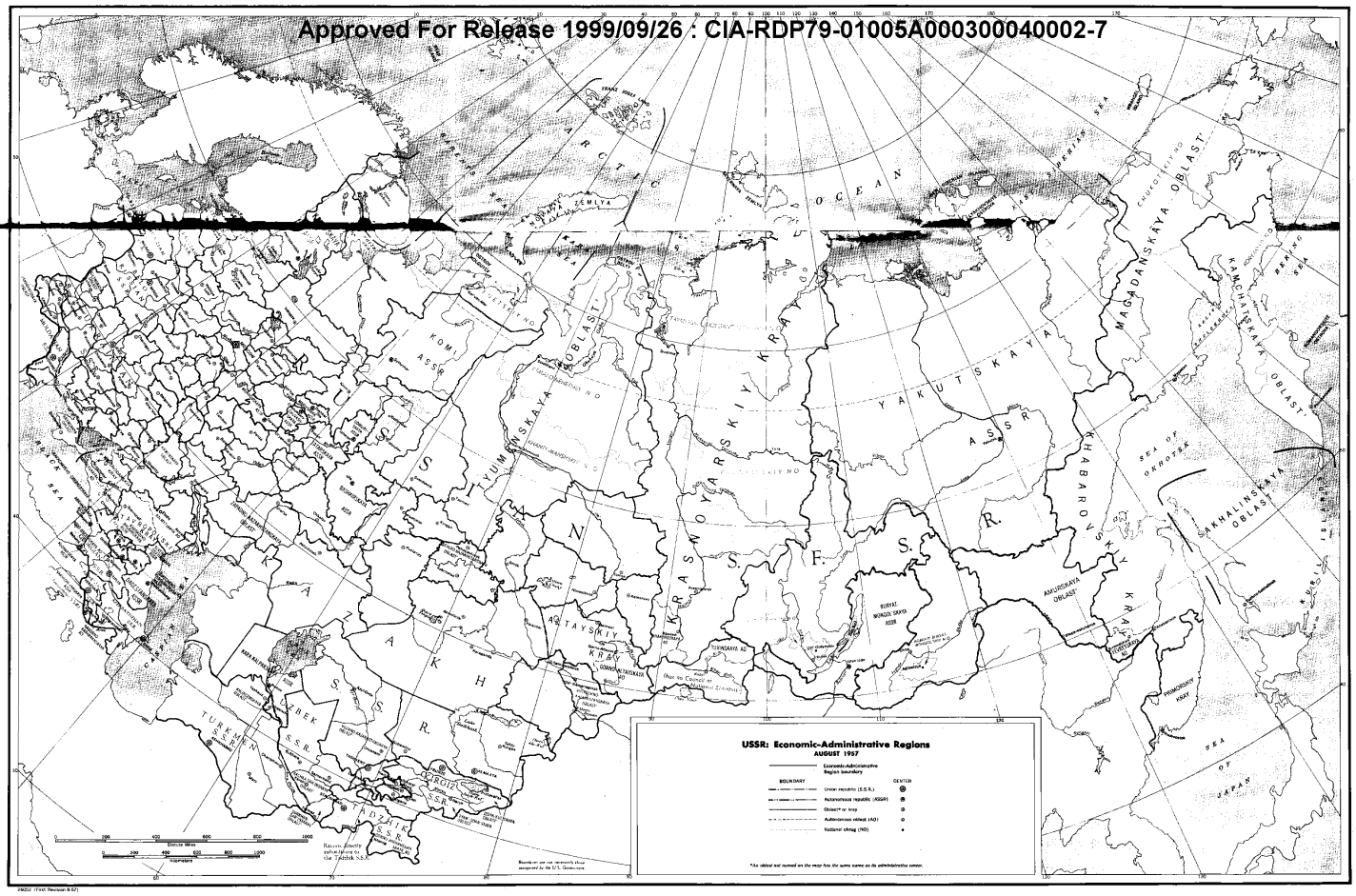

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TENSIONS ALONG THE VIETNAMESE-CAMBODIAN BORDER AND IN THE GULF OF SIAM

Recent actions by the pro-Western South Vietnamese and neutralist Cambodian Governments affecting offshore islands in the Gulf of Siam have called attention to this Southeast Asian area (see Map 26244). An appreciation of some of the underlying causes of tension in this area requires an understanding of certain geographic factors concerning not only the islands themselves but also the border regions of the adjacent mainland.

The delta region of the Mekong River and its distributary, the Bassac, has traditionally been the major rice-producing area of Vietnam. In 1940, two-thirds of the 5 million tons of rice produced in Vietnam was grown in South Vietnam, chiefly in the Mekong-Bassac region. In 1937, South Vietnam exported some 1.4 million tons of rice, a figure that compares favorably with the 2 million tons exported in 1956 by Burma, the leading rice-exporting nation in the world. To the future of South Vietnam -- an unindustrialized, agricultural country with an economy that is now viable only because of United States aid -- the full agricultural exploitation of the delta is of paramount importance. If the country is to survive, this region must be the cash register as well as the rice bowl of South Vietnam.

The region is a low flat plain with elevations generally less than 50 feet above sea level, numerous large areas of swamps and marshes, and dense networks of canals and ditches that connect the

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meandering distributaries of the Mekong River. Mangrove swamps with root systems that form an almost impenetrable maze cover large areas; from early June through December, vast extents are completely inundated. It is a region par excellence for guerilla warfare.

Recently, bandit groups -- allegedly remnants of the Hoa Hao, a dissident group that opposed the formation of the present government -- have been making plundering raids from Cambodia into South Vietnam in the vicinity of Chau Doc (10°45'N-105°5'E). The raids, which the Cambodian Government views with apparently studied indifference, have caused a rapid deterioration of security in the border area. The consequent concern of the South Vietnamese Government is understandable in view of the importance it attaches to the region. In what may be an effort to counter guerilla activities, the Vietnamese are strengthening their position on the islands in the Gulf of Siam, which might be regarded as flanking the Chau Doc area.

Sovereignty over the various islands off the coast of Cambodia and the section of South Vietnam that was formerly Cochin China has been based on a 1939 decision of the French Governor General of Indo China. According to the decision, the limits of insular administrative responsibility were defined by a straight line extending seaward from the mainland near Hatien at a bearing of 234 degrees except in the vicinity of Île du Phu Quoc, where the line made a loop around the island to include it and the water 3

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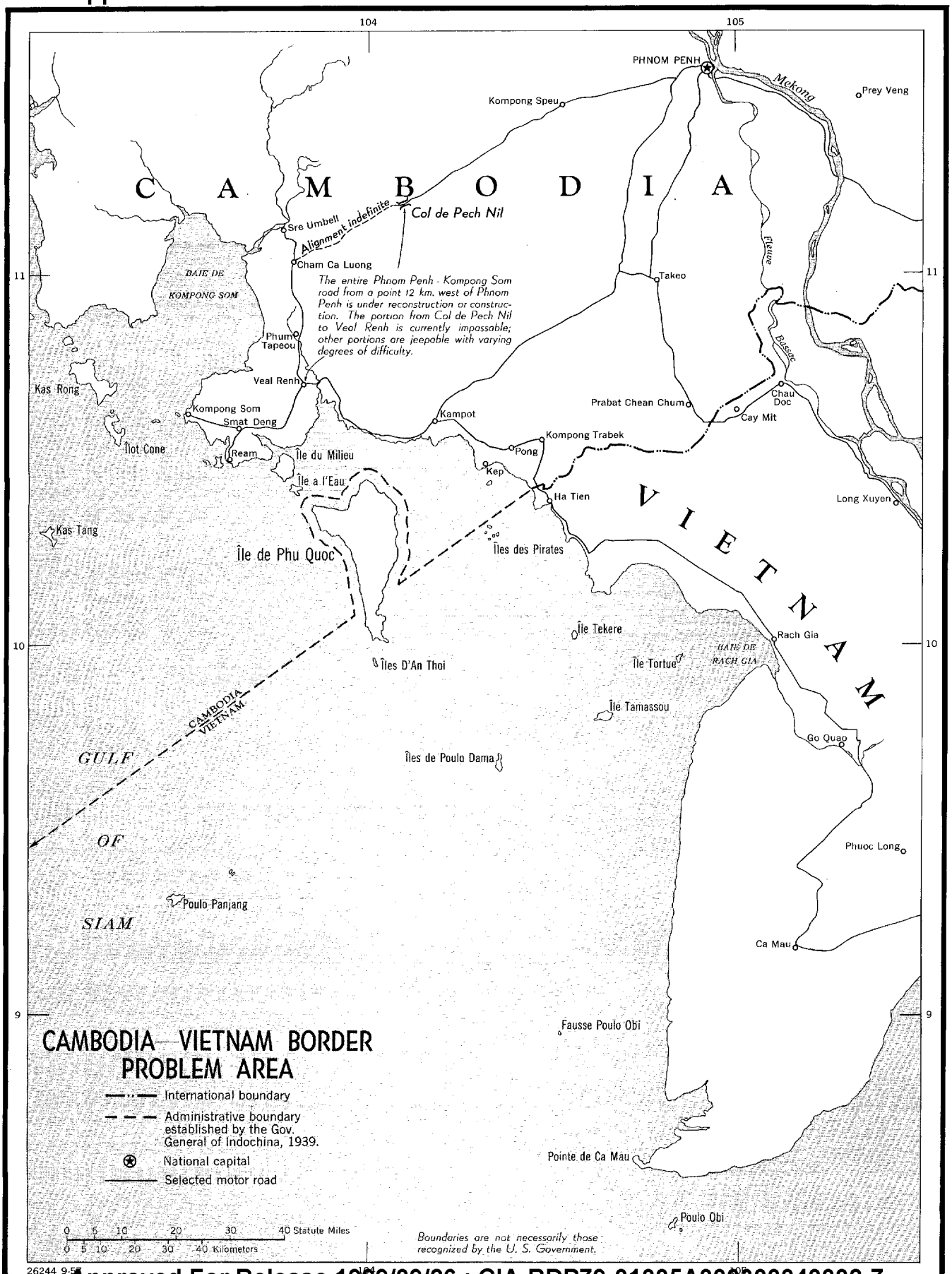

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kilometers north of its northernmost tip under the administration of Cochin China. This decision would mean that currently all islands north of the line belong to Cambodia and those to the south of it to South Vietnam.

The Cambodian Government, as revealed by the views of the Chief of Staff of the Cambodian Navy, apparently holds the position that the French decision is still in effect. Cambodia also considers 4 miles from the Cambodian coast or the islands as the limit of its territorial waters, except in the channel between Phu Quoc and Île á l'Eau, where the division of territorial waters between the two countries is the midpoint of the channel.

Some elements of the Vietnamese Government apparently would like to discontinue recognition of the 1939 French decision. In April 1957 the Vietnamese Navy and the Ministry of Public Works transmitted a proposal to Ngo Dinh Diem, the president of the country, advocating that Vietnamese territorial waters from the 17th parallel on the east coast to Pointe de Camau at the southern tip of the country should extend 12 miles beyond the low water mark in peacetime and 6 miles in wartime. From Pointe de Camau an imaginary line would be drawn to Île du Milieu. Everything east of that line would be considered as Vietnamese territorial waters. West of Île du Milieu the line would be drawn along the middle of the channel between the island and the Cambodian coast. This extreme proposal would mean that all vessels sailing to or from Cambodian

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ports east of Île du Milieu would be forced to pass either through Vietnamese territorial waters or through the narrow channel between Île du Milieu and the Cambodian coast. To date, no reports have indicated that this proposal has been adopted as the official Vietnamese position.

Moves made by South Vietnam and Cambodia to strengthen their claims to the offshore islands have been mutually antagonistic. Recent reports mention the imminent move of two companies of a Vietnamese marine batallion and their headquarters to Phu Quoc. The island, located in the Gulf of Siam opposite the south end of the land border between the two countries, flanks the bandit-ridden area on the rear. Occupation of the island could therefore be interpreted as a warning to the Cambodian Government. In what appears to be a countermove, Cambodia is reportedly fortifying Île á l'Eau, to the east of Île du Milieu, with guns capable of firing across the channel to the north end of Phu Quoc. Reportedly, the head of the Cambodian Navy also intends to place a garrison of Cambodian marines on Poulo Panjang (9°18'N-103°29'E) to the south, even though this island would appear to belong to South Vietnam according to the terms of the 1939 decision. At present the island is not occupied by South Vietnamese military personnel, but in November 1956 the crews of two Vietnamese vessels placed a concrete marker claiming Vietnamese ownership of the island. Any Cambodian attempt to establish a military garrison on the island would probably result in quick counteraction from South Vietnam.

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The offshore islands, of which Phu Quoc is the largest, are of little importance economically to either South Vietnam or Cambodia. Most of Phu Quoc is heavily wooded; much of the lowland is swampy and mangrove-covered. The island is of economic importance chiefly as a source of "nuoc nam," a fermented fish sauce widely used in southeast Asia. The sauce is exported to Thailand, as well as to both Cambodia and the South Vietnam mainland. The only town of any size on Phu Quoc is Duong Dong, with a population of approximately 4,000. Most of the other islands are uninhabited except for occasional Vietnamese, Thai, and Chinese fishermen who seek shelter in storms or land to obtain water, to dry fish, or simply to rest.

The islands appear to have no major strategic importance. Phu Quoc, however, might be of slight value as a Vietnamese post for monitoring traffic to the new Cambodian port of Kompong Som some 30 miles away, and Ngo Dinh Diem might regard the presence of Vietnamese troops on Phu Quoc as a psychological threat to Cambodian-based bandits in the border area near Chau Doc. The island also has a natural-surface airstrip about 2,300 feet long located just north of Duong Dong, but it is suitable for the use of light aircraft only. The former natural-surface airfield at Cua Can is reported as no longer usable. Both of the airfields on Phu Quoc were used by the Japanese during the attack on Malaya during World War II.

Despite the relatively insignificant economic and strategic importance of these islands per se, they have become involved in the

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larger border problem focused on the important rice-producing Mekong delta. The background of recent and current antagonisms between the two young and intensely nationalistic nations suggests that the situation is ripe for an international incident. Such an incident could easily occur if Cambodia attempted to take physical possession of Poulo Panjang. (SECRET)

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CHANGES IN SOVIET TRAVEL RESTRICTIONS

On 28 August 1957, the Soviet Government again revised its regulations on areas closed to travel by foreigners. As a result of the changes, some 315,000 square kilometers (120,000 square miles) have been added to the restricted category, while a number of cities and tourist points that were previously closed have been opened to travel. Most of the newly opened localities are in the Moscow area or along the western border, but in Eastern Siberia the city of Irkutsk also has been declared open.

The largest area to be closed is located in the eastern part of Soviet Central Asia. In the Kirgiz SSR, all of Frunzenskaya Oblast' is now forbidden territory; and in the Kazakh SSR, Taldy-Kurganskaya Oblast', Alma-Atinskaya Oblast', and the part of Dzhanbulskaya Oblast' that lies east of the railroad line between Myn-Aral and Lugovoy are closed. These additions, coupled with the adjacent areas that were previously closed, will seal off virtually all of the USSR-China border in Central Asia and the Lake Balkhash region (see Map 12962). Travel to the cities of Frunze and Alma-Ata, however, will continue to be permitted by rail or air.

Another sizeable area that is placed off limits is Leningradskaya Oblast' west of the Volkhov River except the city of Leningrad and its environs to a distance of 30 kilometers (18.6 miles). Five nearby tourist points -- Zelenogorsk, Petrokrepost', Pavlovsk, Gatchina, and Petrodvorets -- were also specifically excluded from the closed area.

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The remaining newly closed areas are in the Moscow region. Southwest of Moscow the restricted zones include Vysokinichskiy, Ugodsko-Zavodskiy, and Borovskiy rayons in Kaluzhskaya Oblast'. To the northeast, in Vladimirskaya Oblast', three rayons (Struninskiy, Kirzhachskiy, and Pokrovskiy), the city of Karabanovo, and the area under the jurisdiction of the Makhrinskiy sel'sovet have been placed off limits. In addition, travel southeast from Moscow on the Ryazanskoye Shosse (highway) is forbidden beyond the 23-kilometer (14.3-mile) marker (see Map 12795).

In the previously closed area along the western border, four cities have been opened to travel -- the former Rumanian city of Chernovtsy, the former Czech city of Uzhgorod, the former Polish city of L'vov, and Riga, the capital of the Baltic republic of Latvia. In addition, a number of points were opened in Moskovskaya Oblast', namely Abramtsevo, Gorki-Leninskiye, Istra, Solnechnogorsk, Senezhskoye Ozero (lake) and the surrounding area within a 6-kilometer (3.7 miles) radius, Zvenigorod, and the two Oka River settlements of Drakino and Lipitsy (near Serpukhov). Travel to these points in Moskovskaya Oblast' is permitted by automobile over specifically designated highways.

The August 1957 changes bar travel to an additional 1.4 percent of the area of the USSR. Some of the newly closed areas, especially in Leningradskaya Oblast', are of intelligence interest from both military and industrial points of view. On the other hand, this

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loss is balanced to some extent by the fact that the western border cities are of special interest to embassy officers reporting on border installations, political attitudes, and sociological changes. Furthermore, the Soviet note that outlined these changes also offers to discuss the opening of additional cities and areas on a basis of reciprocity, thus suggesting that additional relaxations may be negotiated in the future. (CONFIDENTIAL)

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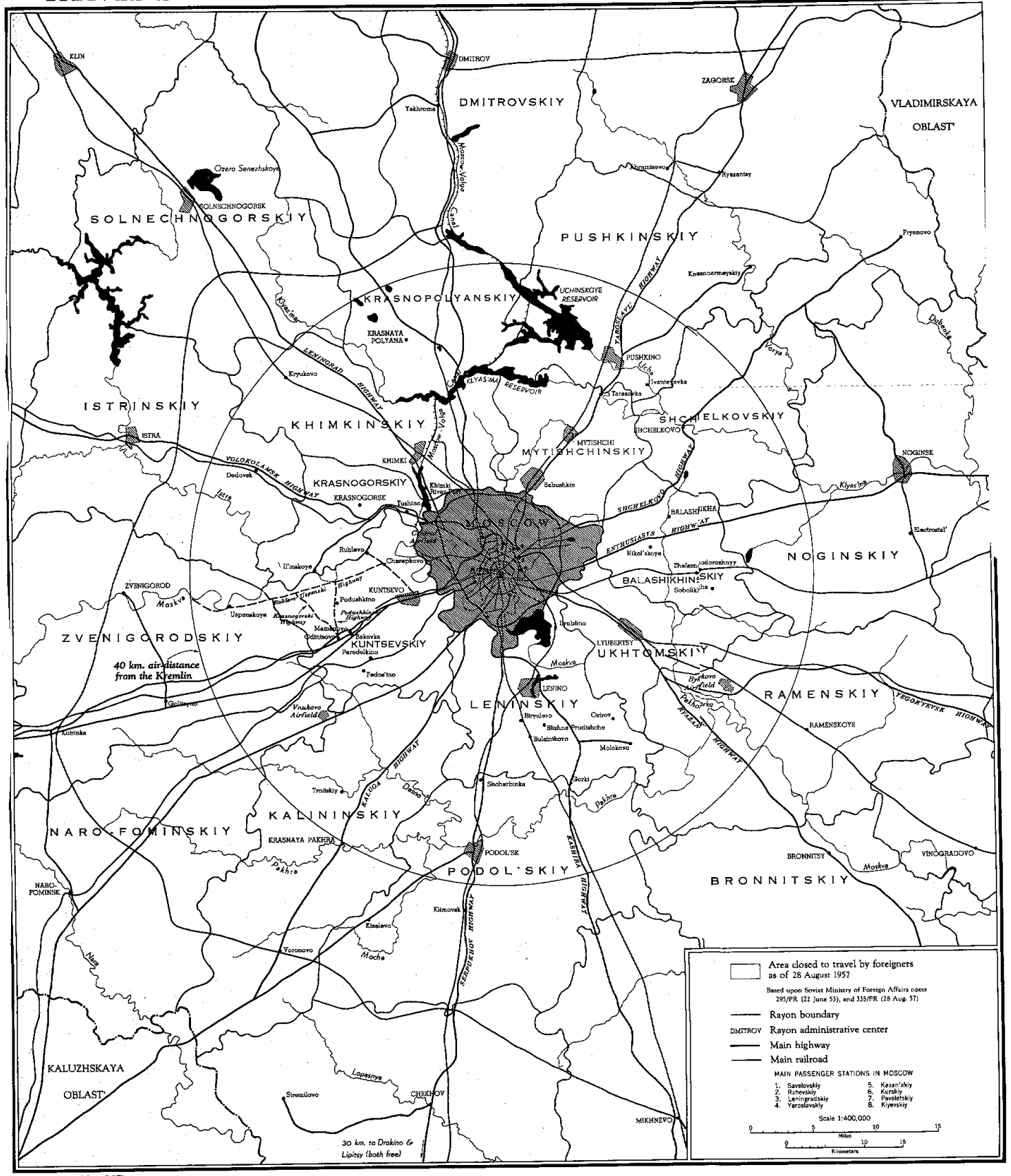
TRAVEL LIMITS FOR FOREIGNERS IN THE MOSCOW AREA – AUGUST '57



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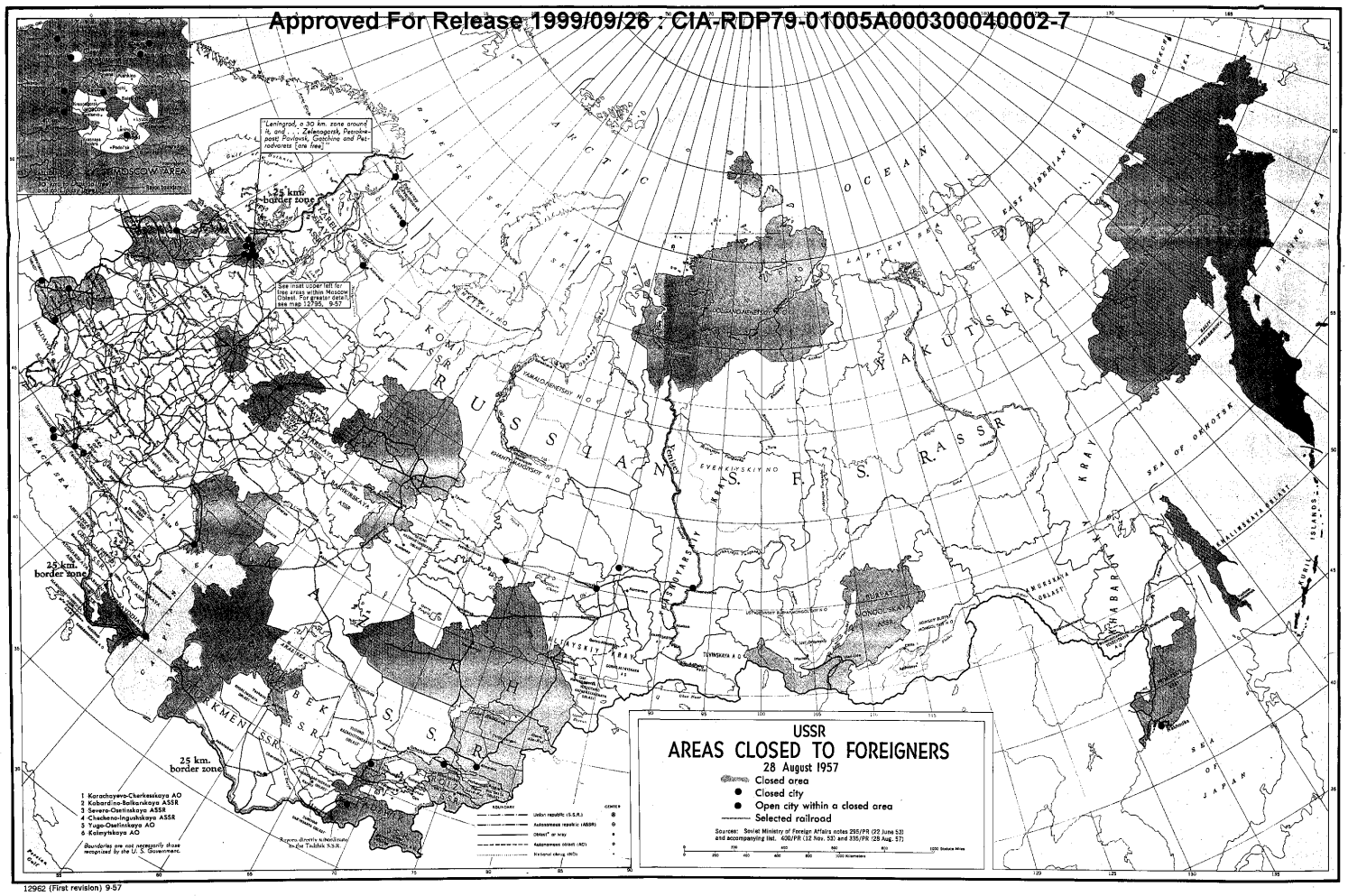

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THE VOLCANIC ERUPTION OF 30 MARCH 1956 ON KAMCHATKA

On 30 March 1956, a tremendous volcanic eruption occurred on Kamchatka Peninsula (see Map 25927). Only recently, however, has the Soviet press published sufficient information to permit an assessment of the magnitude of the explosion. Soviet sources now indicate that it was the biggest that Kamchatka, a peninsula noted for the intensity of its volcanic activity, has experienced in the last 50 years. They also claim -- and their data tend to support the claim -- that the eruption was of greater magnitude than the famous 1902 eruption of Mont Pelée on Martinique. Available details, although still incomplete, enable us to reconstruct the following sequence of events.*

Sopka Bezymyannaya, the volcano that erupted, is located at 55°58'N-160°31'E or approximately 215 miles north-northeast of Petropavlovsk. It is situated on the eastern side of the Kamchatka River Valley, about 50 miles from the eastern coast of Kamchatka. Although located between two active volcanoes of the Klyuchevskaya group (the most important group of volcanoes in Kamchatka), Sopka Bezymyannaya had been inactive for centuries. In a recent study on volcanoes of Kamchatka, Soviet vulcanologists had classified it as "extinct."** This study had barely been published when Bezymyannaya began speaking up as if in protest. In early October 1955, the

*As this article went to press the USSR Academy of Sciences released a formal report on the eruption. Although the report has not yet been received, Western press abstracts of it erroneously place the eruption on the western side of the mountain whereas it seems clear that the gap must have been on the eastern side, as is indicated in this report.

**See A.N. Zavaritskiy, Vulkany Kamchatki, Moscow, 1955.

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seismic station at Klyuchi (which had been set up primarily to study the adjacent active volcano Sopka Klyuchevskaya) began to register an increasing number of earth tremors. Finally on 22 October, Bezymyannaya erupted. Initially, the activity was limited to rising pillars of smoke; in a short time, dense puffs of ashes and gas, illuminated by flashes of lightning, rose to a height of a mile or two, while the ground quaked under a series of shocks. The clouds of ashes grew larger, eventually obscuring the sky and causing complete darkness at times. On the slopes of the volcano, a layer of fresh ashes covered the ground to a thickness of several yards. Even 25 miles away, at the settlement of Klyuchi, the fallout amounted to 3.3 pounds per square foot.

In November the eruption increased in intensity until the height of the pillar of ashes reached 7 miles. By January, the eruption began to abate somewhat, and the Soviet vulcanologists were able to fly over the crater and make extensive observations. At that time, they saw that the summit of the volcano was partially destroyed and that the crater had grown considerably larger. Within the crater was a dome of half-thickened lava that glowed at night. By the middle of February the dome had spread outward to the edge of the crater and stone avalanches began to slide down the slopes of the volcano.

At 1711 hours on 30 March 1956, the earth shook violently and the volcano exploded again -- this time on a far more intense scale

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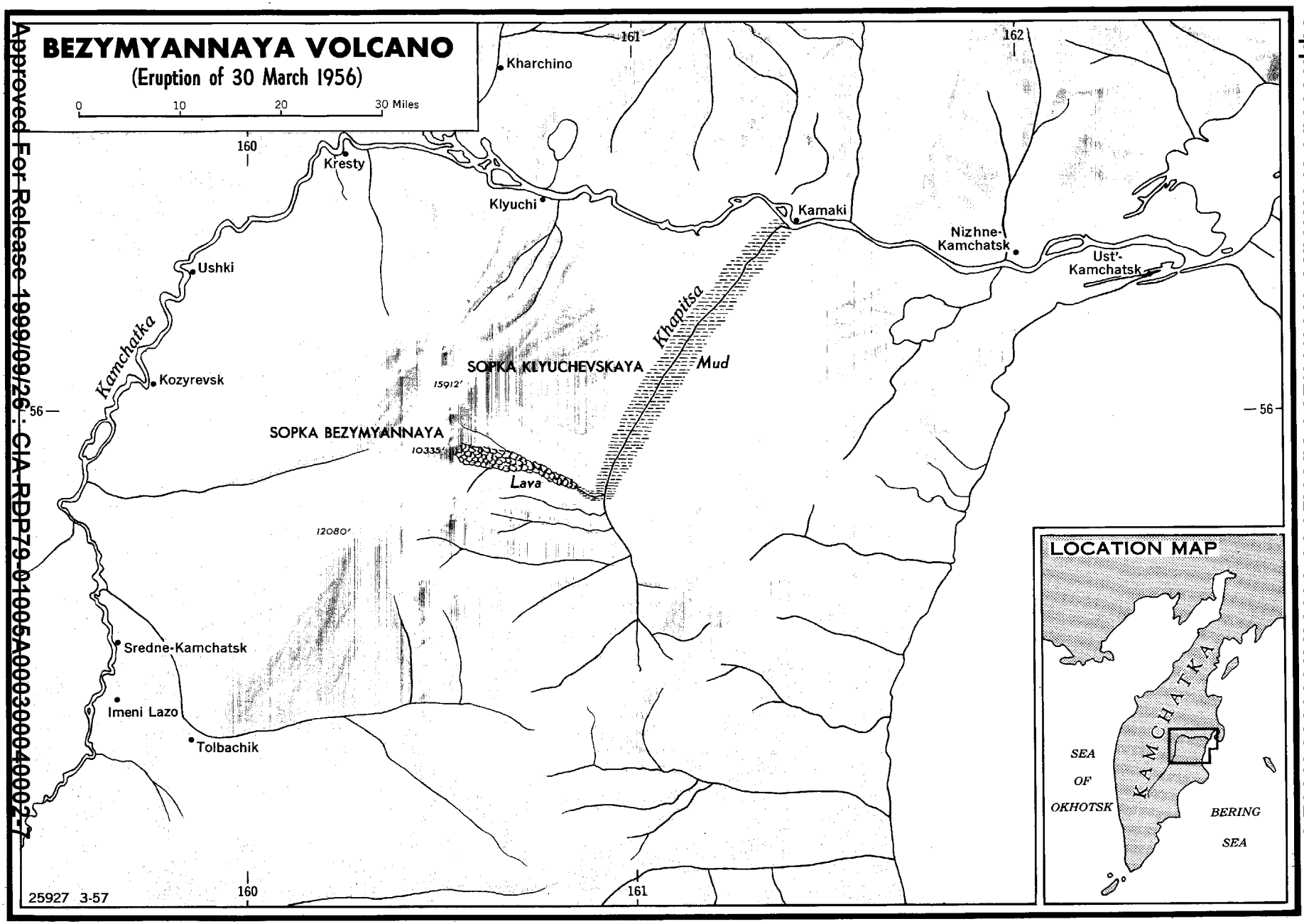

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than before. The entire eastern slope of the volcano was destroyed "to its very foundations." Huge clouds of ashes were thrown up to a height of 25 miles. All the trees within a radius of 12.5 miles were broken and scorched by the bursts of hot gases and ashes from the crater. A few minutes later, a stream of molten lava flowed out of the ruptured side of the volcano and rolled eastward 12.5 miles down the bed of the nearby Khapitsa River. In some places the lava was deposited to a depth of about 100 meters (330 feet). Meanwhile, the ejected ashes and gases had melted the snow over an area of approximately 200 square miles. The resulting runoff produced an enormous mass of flood water that carried away ashes, stones, soil, and trees and laid the landscape bare. Wherever the flow of mud and water came in contact with hot ashes or lava, secondary explosions took place by tens and even hundreds. The stream of mud and water continued down the Khapitsa Valley for 50 miles, destroying everything in its path, and eventually poured into the Kamchatka River at Kamaki, about 25 miles downstream from Klyuchi.

At the time of the eruption the wind was from the south, and it carried the cloud of ashes, and the accompanying streaks of lightning and peals of thunder, right into Klyuchi. The visibility there became so poor that people roamed about in search of their homes.

Data on the quantity of fallout for the eruption of 30 March are incomplete, but an appreciable amount was registered throughout an area 50 miles wide. The following morning the Klyuchi vulcanological

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station reportedly measured 4.1 pounds per square foot (20 kilograms per square meter).* The associated seismic disturbance also set off a sea wave, which measured 1.9 feet at Attu Island in the Aleutians and 1.1 feet at Honolulu.

On 1 April 1956, still another explosion occurred. This time the focus of the disturbance was about 31 miles below the surface of Sopka Bezymyannaya, but the surface eruption shot gases and ashes up to a height of 6 miles.

Although the force of the eruption of 30 March was reportedly at least several dozen times that of an ordinary atom bomb, there appear to have been no human casualties. Unlike the situation at Mont Pelée, where the 40,000 inhabitants of the town of Saint Pierre were in the path of the volcano's fury, the area immediately around Sopka Bezymyannaya is completely uninhabited. Nevertheless, activities at Klyuchi and other neighboring settlements must have been disrupted for a short period. It is also probable that additional dredging was required on the lower course of the Kamchatka River before the opening of the 1956 navigation season. At present, Soviet scientists feel the volcano has expended its force, and they consider it harmless.

Incidentally, films were taken of the main phases of the eruption and it is expected that a Soviet newsreel on the subject will be released in the near future. (CONFIDENTIAL)

*This figure was garbled in transmission and is therefore not fully reliable. Assuming that the fallout value for 22 October was correct, this figure seems far too low.

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CHANGE IN SOVIET TIME ZONES

On 1 March 1957 a redelineated system of hourly time zones was initiated in the Soviet Union. Boundaries for the new zones have been drawn to coincide where possible with north-south territorial-administrative boundaries, whereas the previous boundaries were coincident with meridians, rivers, or railways (see Map 26086).

The Soviet Union stretches across 11 time zones -- the second through the twelfth zones of the 24-zone universal time system based on Greenwich. The time in the westernmost zone of the Soviet Union, in which Moscow is located, would normally differ from Greenwich time by plus 2 hours; actually, however, there is a 3-hour difference because the Soviet Union has been on year-round daylight saving time since 1931. Telegraph and railroad systems throughout the Soviet Union operate on Moscow time.

The former time zones in the Soviet Union were established in 1919. They were bounded by meridians at 15-degree intervals or by north-south-flowing rivers or railways approximating these meridians. As economic development and changes in territorial-administrative structure unified areas that lay in two or more time zones, the old zoning system became increasingly inconvenient. Some small oblasts in the western USSR, such as Ivanovskaya, Vladimirskaya, and Voronezhskaya, were split by zonal boundaries; farther east, where larger units are common, the Kazakh S.S.R. was divided into 4 zones, and the vast territory of Yakutskaya ASSR fell into 5 zones. The city of Novosibirsk, which lies on both banks of the Ob' River, was

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split into 2 time zones by the zonal boundary that followed the river.

The new time zones overcome some of the difficulties of the old system by encompassing administrative units within single time zones wherever possible. The boundaries between the 4 westernmost zones fall entirely along administrative boundaries, with only one exception: Arkhangel'skaya Oblast' lies in 2 zones. Kazakhstan now falls within only 2 time zones, and Yakutskskaya ASSR within 3 zones. Meridional or watershed boundaries cross the virtually uninhabited expanses of the northeastern USSR where administrative units are so large that they cannot be contained within any approximation of a 15-degree zone. The boundary between zones 9 and 10 which formerly placed Sakhalin Island in zone 9 is now shifted to the west to include the island within zone 10.

If administrative boundaries that coincide with time-zone boundaries are changed in the future, the time-zone boundaries will probably be changed correspondingly. (UNCLASSIFIED)

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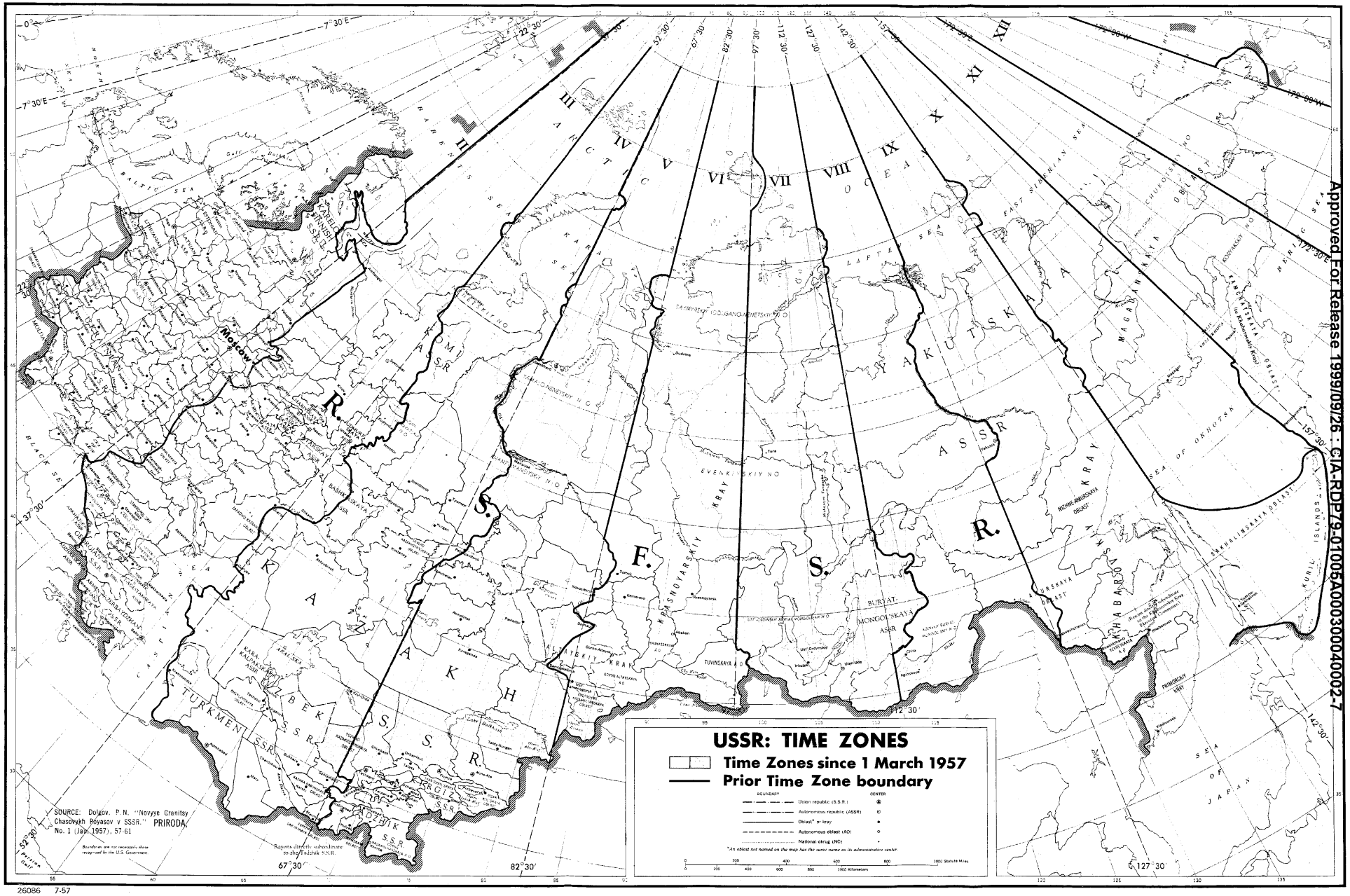

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A NEW RUSSIAN CHART OF ZEMLYA FRANTSA-IOSIFA

A 1954 Russian chart, Zemlya Frantsa-Iosifa (Franz Josef Land) at the scale of 1:1,000,000 has recently become available to the Washington intelligence community.* Although it seems to have been designed primarily for navigation, the chart fills a gap in the map coverage of this part of the Arctic since the only other available maps at comparable scales are a 1937 Russian Hydrographic Chart and a 1956 U.S. Air Force World Aeronautical Chart, which was based largely on the old Russian chart. The 1954 chart was produced by the Cartographic-Geodetic Division of the Moscow Engineering Institute of Geodesy, Aerial Survey, and Cartography (MIIGA) and carries the numerical identification U/T 38,39,40,41, the IMW sheet designations; it is also identified as KGD 697.

The chart is reported to be compiled from aerial photography, and the configuration of the islands differs widely from that shown on older maps based on surveys made from land and sea. The most pronounced differences in configuration are on Ostrov Greyam-Bell, Ostrov Vil'cheka, and Zemlya Aleksandry.

For many capes, islands, and seas, names have been added or old ones have been changed. The substitution of the single name Proliv Zubova for the two seas, the Payer More and Vayprekht More, is the most conspicuous change. Payer and Weyprecht were leaders of the Austro-Hungarian expedition that discovered the archipelago;

*Available in the CIA Map Library under Call No. 100808.

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Nikolay Zubov led the first Russian circumnavigation of Zemlya Frantsa-Iosifa.

A few significant installations have been added to or deleted from the map. The most important addition is the location of Nagurskaya airfield on Zemlya Aleksandry. This field has never been identified on earlier Russian maps, and its position on the island has been known only approximately from western documents. The polar station at Bukhta Tikhaya on Ostrov Gukera is shown but the polar station on Ostrov Rudol'fa, which has operated sporadically since 1932, has been deleted.

The chart contains little physical information other than outlines of the islands. No contours or spot elevations are indicated on the land, and no soundings are given for the straits and seas surrounding the islands. Ice-free areas on the islands are outlined, however, and surface drainage is shown for such areas on Ostrov Greyam-Bell, Zemlya Aleksandry, and Zemlya Georga.

Although lack of complete data definitely limits its use, the 1954 chart does provide accurate outlines and positions of the islands as well as current names and locations of some landforms and other features. (SECRET)

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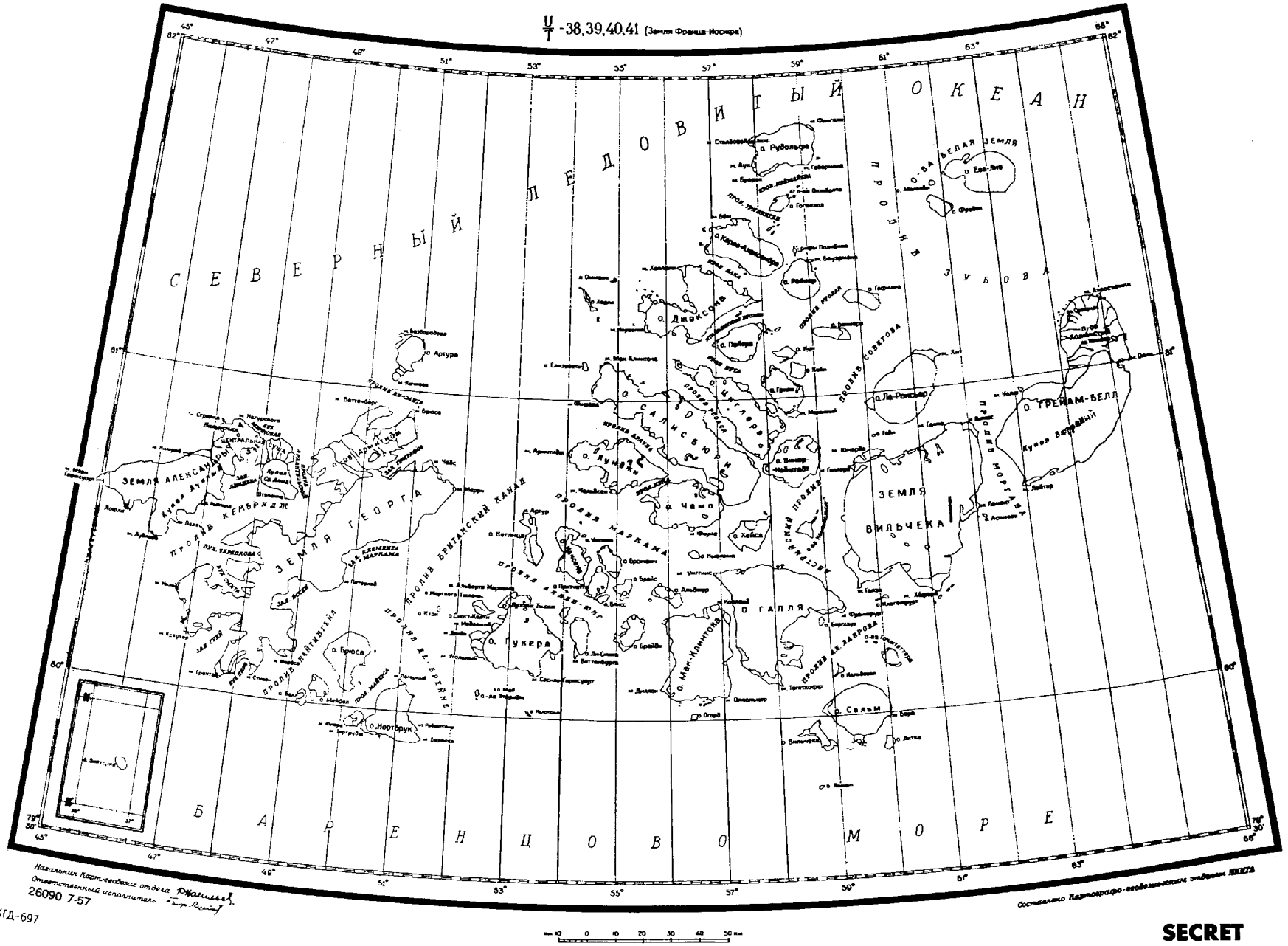
ZEMLYA FRANTSA-IOSIFA



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PROPOSED ADMINISTRATIVE CHANGES IN EAST GERMANY

According to reports, a reform is under consideration in East Germany that would bring the system of rural local government more closely into line with Communist doctrine and would create local civil divisions patterned after Soviet models. For this reason the plans are worthy of brief consideration, even though it is unlikely that the proposed changes will be fully implemented in the near future because of the present political, economic, and psychological climates within East Germany.

The long-range plans call for a reorganization of the administration of rural areas by establishing a new lower order division at a level between the Kreis (district) and Gemeinde (village or commune) -- the Bereich (area) -- which will also have a new kind of administrative center -- the "central village." The creation of central villages is an attempt to further the present Communist policy of spreading "Socialism," as well as a means of increasing the control of the central government over rural areas. Each of the 194 Kreise of East Germany is to be divided into several Bereiche. Each Bereiche will consist of 3 to 5 Gemeinden, one of which will become the central village. The facilities in this village will be expanded and it will become the local seat of the state administrative machinery. Governmental activities conducted in the central villages will be concerned with agriculture (including compulsory delivery of agricultural products), finance, economic affairs, labor, social

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welfare and housing. Various types of collective organizations are also to be housed in the central villages, thus making them political and cultural centers for the Socialist Unity Party (SED), the Communist party of East Germany, as well as administrative centers. The prototype for the Bereich seems to be the Sel'sovet of the USSR, and the proposed East German reform is similar to those undertaken in Poland, parts of China, and perhaps other countries of the Soviet Bloc.

Kreis Hoyerswerda, northeast of Dresden, has been selected as one of the first to be divided into Bereiche. Each newly created Bereich will include several existing villages, one of which will become the important central village. Hoyerswerda is apparently slated to become a Communist show place. In addition to the proposed central village reform, current plans call for the creation within Hoyerswerda of the second East German "Socialist town." This new industrial town -- similar in pattern to the model town of Stalinstadt, which was created in 1953 -- will not be a compact urban area but will be strung out along the brown coal fields of the area known as "Schwarze Pumpe" (Black Pump), between the villages of Spremberg and Hoyerswerda. According to plan, the workers' settlements within this development will have an estimated 37,000-48,000 inhabitants by 1964. Their efforts will be concentrated on coal mining and coke production for the Kokskombinat (coke-combine), an enterprise now being formed.

Long-range plans for rural areas in East Germany also include a tightening of security measures, but reports concerning the security

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problems that are supposed to be solved by this new administrative reform are vague. An armed peasants' militia, composed of Kampfgruppen (fighting groups) similar to those in factory enterprises, is to be formed in agricultural areas. It can be assumed, however, that the rural areas will not be covered by as tight a network of Kampfgruppen as are the industrial areas, since it is more difficult to motivate peasants than factory workers to serve in armed fighting groups. To guard against defection to the West, particularly by East German Army personnel, units of the peasants' militia, strategically located as spotters, would be charged with the responsibility of being on the lookout for suspicious passers-by. Apparently it is hoped that the increasing centralization of authority and tightening of security at the local levels will help solve the defector problem in East Germany. (CONFIDENTIAL)

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PLASTIC RELIEF MAPS*

The following article was prepared primarily to call the characteristics and availability of plastic relief maps to the attention of members of the intelligence community who seldom use maps, yet occasionally need them, and may be unaware of the advantages of this type of map and the considerable expansion in coverage that has been made in recent years.

* * * * *

During World War II, the difficulties encountered in training large numbers of people to read maps and comprehend terrain briefings indicated that the visualizing of landforms from map symbols required a topographic sense that was far from universal. The relief model has been recognized as the best visual aid for resolving this problem, because it shows relief in a way that is easy to understand and permits an all-dimensional grasp of the terrain. Also, properly designed models can eliminate false impressions sometimes gained from personal reconnaissance or from viewing stereo pairs of photographs. During World War II, the demand for models generally exceeded the supply. The need for hand painting each model was the chief factor retarding production. Although this was widely recognized, wartime conditions precluded the extensive research required to improve production methods.

*This paper has been coordinated with Relief Map Division, Army Map Service.

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The need for quantity production of terrain models apparent at the close of World War II prompted the Army Map Service (AMS) to undertake extensive experimentation in production methods in 1947. This effort, which lasted some 3 years, led to the refinement of old techniques and the development of new ones by which three-dimensional plastic relief maps could be mass-produced economically. Vital among the new techniques is the procedure whereby standard flat map information is printed on thermo-plastic sheets for subsequent forming by heat and vacuum over a master model. Use of this process eliminates hand painting and means that literally thousands of copies of a model can be produced with little hand work of any kind except that required in the construction of the master model. The technical aspects of plastic relief map production have been well-described in a number of readily available articles and bulletins. Of these, the most complete and most recent is AMS Bulletin No. 29, edition 2, March 1956.

Plastic relief maps were first used extensively in the field in the Korean War, during which they were well-received and were declared a firm operational requirement of the armed forces.

The Army Map Service has become the principal government producer of plastic relief maps; and, since economical production is dependent on the availability of flat maps suitable for use as sources, the coverage prepared to date for the most part mirrors the sheet lines and characteristics of standard AMS flat map series.

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The following list gives a general picture of the coverage now available. Details regarding sheet availability are presented in the AMS Catalogue and Quarterly Progress Report, both of which include coverage index maps. Additional information on the availability of plastic relief maps and other types of three-dimensional terrain presentations can be obtained by consulting card catalogue of the Inter-Service Committee on Terrain Models.*

AMS Plastic Relief Map Coverage as of August 1957

(Coverage complete or nearly so for each named area unless otherwise indicated. Continental U.S. coverage is not listed.)

1:25,000

Germany (small scattered areas)
Hawaii (part of Oahu)

1:50,000

Alaska (scattered areas)
Austria (western)
Korea (central)

1:250,000

Alaska (scattered areas)
Algeria (coast)
Austria
Belgium
British Isles
Burma (northwestern)
China (scattered areas mostly in the south and solid areas along south and east coasts)
Czechoslovakia

*Copies held by the Relief Map Division, Army Map Service, and by the U.S. Naval Photographic Interpretation Center are open to U.S. officials with proper security clearance.

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1:250,000 (continued)

Egypt (eastern)
Germany (southern)
Greenland (coastal area)
Hawaii
Iceland
India (eastern margin adjoining Burma)
Indochina (most of coast and some central areas)
Iran (northwestern)
Italy (northern)
Japan
Korea
Lebanon
Morocco (major part)
Norway (southern)
Syria (western and central)
Switzerland
Taiwan-Formosa
Tunisia (north coast)
Turkey
USSR (maritime provinces; Sakhalin)
Yugoslavia (northwestern)

1:1,000,000

Africa (north)
Alaska
Aleutian Islands
Asia, Central (scattered areas)
Canada (western)
China (scattered areas and southern Manchuria)
Europe
Iceland
Indochina (eastern half)
Korea
Middle East (extensive but incomplete coverage)
Taiwan-Formosa
USSR (European; eastern USSR north and west of Bering Sea and north and west of Okhotsk Sea; vicinity of Vladivostok; Komandorskiye Islands)

The Army Map Service now produces new plastic relief map sheets at the rate of about 15 per month. On the basis of scale, current production is approximately as follows: 1:250,000, 80 percent;

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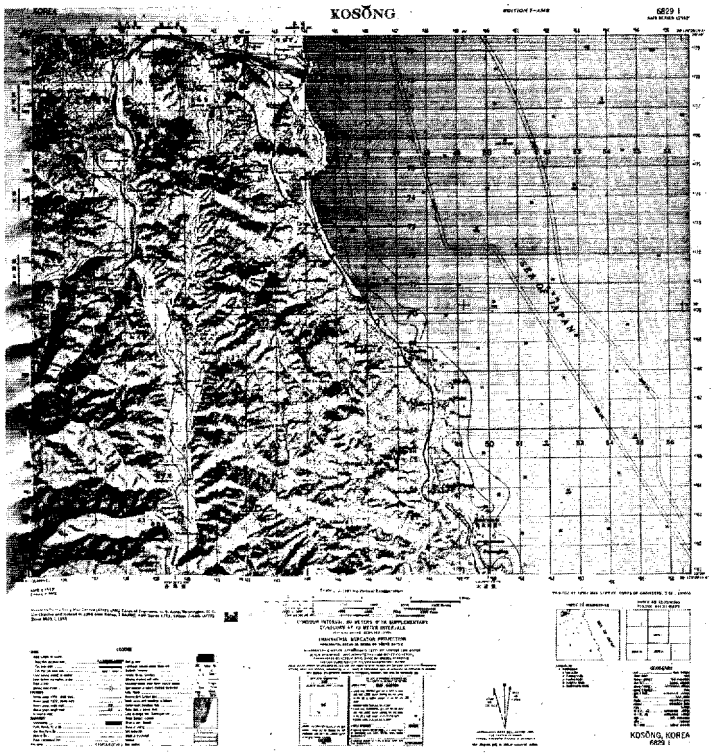
1:1,000,000, 15 percent; other scales, 5 percent. Sheets at scales larger than 1:250,000 are, as a rule, prepared only for special purposes. The production of a group of plastic relief maps covering continental areas at 1:5,000,000 has been under consideration for some time.



A representative plastic-relief map sheet that covers a section of the east coast of Korea at 1:50,000.

Other U.S. Government producers of plastic relief maps include the Photographic Interpretation Center (PIC) and Special Devices Center (SDC), both Navy organizations, and the U.S. Air Force Aeronautical Chart and Information Center (ACIC). At present,

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however, none of these agencies produces plastic relief maps in quantities comparable to the output of the Army Map Service.

The U.S. Naval Photographic Interpretation Center now concentrates largely on the preparation of spot model coverage for strategic areas of Navy interest, e.g., islands, straits, ports, harbors, gulfs, and, in a few cases, major seas. Some master models are still reproduced in rubber, although plastic reproduction is more common. PIC has been particularly active in preparing molded photo-relief maps. The Navy Special Devices Center in Port Washington, New York, is mainly a research and development agency with limited capacity for the production of terrain models and plastic relief maps. Current SDC model output is mostly experimental or for training purposes. The Aeronautical Chart and Information Center maintains modest facilities in St. Louis for the production of terrain models and plastic relief maps, but it does not now publish plastic relief maps for general distribution. Most current ACIC plastic relief map work is on special maps for training radar operators and on experimental charts used in the development of target-guide materials.

The past output of the three secondary government producers of plastic relief maps (PIC, SDC, and ACIC), includes some maps of strategic areas in the USSR, the Far East, and Europe that are of potential interest to the intelligence community. Although not all of these maps were reproduced in quantity, copies of most can be obtained if the need is great enough. Data on the coverage and

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characteristics of PIC, SDC, and ACIC plastic relief maps and other types of three-dimensional terrain presentations are included in the inter-service terrain model card file.

Government agencies producing plastic relief maps are continuing to investigate new materials and processes with an eye to expediting production and reducing costs. Of late, much of this effort has been directed toward speeding production of master models and improving their accuracy.

The Aero Service Corporation of Philadelphia appears to be the most important private producer of plastic relief maps in the United States. To date, this firm has published a map of South America at 1:7,000,000, a map of Europe at 1:4,752,000, a map of Canada at 1:4,500,000, a map of Venezuela at 1:1,250,000, maps of parts of Israel at 1:100,000 and 1:50,000, and numerous maps of the continental United States at various scales. The last includes a group of U.S. Geological Survey quadrangles selected especially to facilitate the study of physical geography and geology. Two other U.S. commercial concerns -- Panoramic Studios of Philadelphia and South Salem Studios of South Salem, New York -- are capable of preparing master models and plastic relief maps, but have not yet produced maps in quantity. Among foreign mapping agencies, the Institut Géographique National of France, the Istituto Geografico Militare of Italy, the Instituto Geograficoy Catastral of Spain, and the Karl Wenschow firm of München, Germany, have been active in the production of models and have done considerable experimental work on plastic relief maps. So far as

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is known, however, neither these nor any other foreign establishments have as yet undertaken quantity production of plastic relief maps.

Recalling the foam rubber, plaster, and papier maché reproductions of terrain models produced during World War II, some map users have wondered if the preparation of such models has given way completely to the production of plastic relief maps. The answer is a qualified "yes." With the expansion in mass-produced plastic-relief-map coverage, the demand for other types of terrain models has declined and will continue to do so. U.S. Government agencies, however, still prepare a few models for reproduction in rubber where it is obvious that the demand for copies will be slight, or where there are other special considerations. The fact that foam rubber models are easy to transport and can stand much rough handling without having their usefulness impaired will probably assure some continued use of rubber as a reproduction medium, particularly for small-scale models. Plaster and papier maché, however, are now seldom used in preparing "consumer copies" of master models.

Since plastic relief maps cannot be folded, rolled, or conveniently stacked, they present a storage problem and, in comparison with flat paper maps, are difficult to transport and use in the field. Moreover, if handled roughly, plastic maps are likely to be crushed or scratched. Despite these disadvantages, which may eventually be overcome by the development of new plastics, the per unit cost factor has made the plastic relief map the standard three-dimensional terrain presentation for government use.

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The fact that certain tasks performed with the aid of plastic relief maps can also be done with flat maps has caused some confusion regarding the uses for three-dimensional terrain presentations and, in some quarters, a lack of appreciation of their unique properties. The picture can be clarified somewhat by breaking down the uses for plastic relief maps into three main groups: (1) uses identical to those of flat maps in which the molded relief offers few if any advantages; (2) uses similar to those of flat maps in which the molded relief permits certain jobs to be done much more efficiently than would be possible with a flat map; and (3) functions that cannot be performed by a flat map. In the first category would be a reader referring to a plastic relief map for the general location of a town, road, or river. In the second group would be the briefing of infantrymen on terrain problems, delineating areas of enfilade and defilade, locating radar sites and areas free from radar detection, and strategic planning. A key application in the third category would be in photography, i.e., the photographing of three-dimensional maps to show terrain as it would appear from a particular direction at a particular time. Such photos have been used to illustrate many types of studies and have been particularly effective in preparing materials for the guidance of airmen.

The Army, Navy, and Air Force are currently conducting user surveys that may call attention to new ways in which three-dimensional terrain presentations can be of service. Under any circumstances, it

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is likely that new uses will develop as the available coverage increases and the advantages of the plastic relief map become more widely known. (SECRET)

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